

2.5-2.8 Review (KEY)

1. $2x^2 - x + 3 + \frac{-5}{x-1}$, no
2. $2x^2 + x + 3 + \frac{-13}{x+1}$
3. $f(x) = x(x-2)(x+3)$ $f(x) = x^3 + x^2 - 6x$
4. $x = 0, x = -3, x = -1$
5. $x = 8, x = -2$
6. b, c
7. $\pm 1, \pm 3, \pm 9, \pm 27, \pm \frac{1}{3}$
8. remaining zeros: $x = -3i, x = 2, x = -1$ $f(x) = (x-3i)(x+3i)(x-2)(x+1)$
9. $f(x) = x^3 + x + 10$
10. no positives, 2 or 0 negatives
11. $(\sqrt{2}, 0)$ *irrational* $(-\sqrt{2}, 0)$ *irrational* $(-1, 0)$ *rational*
12. degree 4, $f(x) = -3x^4 + 9x^3 - 12x$, $(0, 0), (2, 0), (-1, 0)$